



NMR&D News

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NMRC's Patricia Guerry Awarded Service to America Medal

By MC1(SW) Arthur N. De La Cruz

Dr. Patricia Guerry, Ph.D., the Molecular Biology and Biochemistry Branch Chief at the Naval Medical Research Center (NMRC) in Silver Spring, Maryland, was awarded the 2009 Service to America Medal (Sammie) in the field of Science and Technology at a ceremony held at the Andrew W. Mellon Auditorium in Washington, D.C., on September 23. Dr. Guerry was selected from among 400 nominees to receive this prestigious award from the Partnership for Public Service for her work on a *Campylobacter* vaccine, said CAPT Richard L. Haberberger, NMRC commanding officer.

"It's certainly not my single-handed achievement," said Guerry, attributing the award to the scientific team she works with. "A lot of people contributed to this. It's an amazing group of people who were nominated, and I'm really honored to be included among them to represent my group. It's a real honor to receive the Sammie."

The Sammie is awarded to civil service employees in recognition of their contributions in various fields such as Science and Technology, Homeland Security and the Environment. Guerry received the



Recipients of the 2009 Service to America Medals gather on the stage at the Andrew W. Mellon Auditorium. Dr. Guerry is third from the right

medal in acknowledgment of her work in developing a vaccine to battle the world's top cause of food-borne intestinal illness.

"Dr. Guerry's body of work brings much credit to herself and to Navy Medicine," Haberberger said. "It was an honor to attend the Service to America Medals awards ceremony and see one of our own receive the 2009 Science and Technology Medal."

Though Guerry has been working toward combating this bacteria for 20 years, the most significant advancements came about in the last five years, thanks to a discovery about *Campylobacter* that led to a new approach in its vaccine development.

"*Campylobacter* is a really challenging organism to work with because it changes all the time," Guerry explained. "It's constantly mutating. It is unlike other enteric pathogens, so approaches that have been used for other organisms just have not worked for *Campylobacter*. So

far the vaccine has shown really great promise in non-human primates."

Guerry's team was awarded a grant from the National Institutes of Health in April to produce a vaccine suitable for human trials. She anticipates conducting the first trial within two years.

Campylobacter continues to hamper the mission of forward-deployed service members worldwide. Guerry said the bacteria is estimated to annually cause 2.5 million cases of diarrhea in the U.S. and 400 million cases worldwide. It is also associated with inflammatory bowel syndrome.

"It's an organism the military would like to have a vaccine against so they can protect the troops," said Guerry.

After successful human trials, Guerry said NMRC will be able to field a vaccine for the troops.

"My hopes are that it is going to be as protective in people and that it will be commercialized in the near future."

Photos by Sam Kittner



Dr. Patricia Guerry, Ph.D., (right) receives the 2009 Service to America Medal from Ms. Michele Flournoy, Under Secretary of Defense for Policy

Commanding Officer's Message

Researchers, Support Staff and Stakeholders of Navy Medical Research, Development, Testing and Evaluation (NMRDT&E):

This is indeed a historic time for Navy Medical R&D with BRAC consolidation, flattening of the organization and the establishment and relocation of new commands and laboratory facilities that will facilitate our efficiency with state-of-the-art facilities and equipment. I am proud and honored to return to Medical R&D to lead these changes and carry on with our vision for our Navy Medical R&D enterprise in these increasingly challenging times. I look forward to working with the dedicated and talented people we have and I ask for your continued support in helping me chart a course for our future. At this time, I would also like to welcome RDML Eleanor Valentin, NMSC Commander, to our family as our new Flag Officer and sincerely thank RDML Richard Vinci for his outstanding support of Navy Medical R&D.

I want to take this opportunity to reiterate to you that SAFETY and SECURITY - your safety and your security - are my top priority. Providing you with a safe and secure work environment is my highest priority and should be yours as well. Currently we are implementing a Safety Self-Assessment program, ESAMS, throughout our enterprise. We will use this program to augment our other means of providing you with a safe and secure work environment. Your input is needed to continuously improve in areas you identify as lacking or suboptimal. I ask our RDT&E leadership to embrace these Safety Self-Assessments and follow up with strategies to continuously improve upon deficient areas. I would also like our leadership to assess their security measures aboard their commands and let me or Mr. Jerry Morris know of any concerns you may have; this includes information technology vulnerabilities.

I am happy to introduce our new Command Ombudsman, Dr. Angela Prouty, who relieved Mrs. Wendy King in August. I want to thank Mrs. King for a job well done!

I am also pleased to announce that Dr. Patricia Guerry was selected for the prestigious 2009 Science and Technology Medal for her work with *Campylobacter* by the Partnership for Public Service Organization. The award was presented in the Service To America Medals Ceremony recognizing outstanding federal employees held at the Mellon Auditorium in Washington, DC on Wednesday, September 23. Congratulations, Dr. Guerry. For more information on the Service to America Medals, visit <http://servicetoamericamedals.org/>.

In this issue of our newsletter, we highlight one of Navy Medicine's greatest success stories, the Bone Marrow Donor Program. Since its inception as a Navy program in the 1980s, it has grown into a national program led by the NIH with Navy participation. We can all be proud of the great achievements of this program for its science and its contributions to saving human life. I hope you enjoy reading about NMRDT&E.

Commanding Officer sends,

Richard L. Haberberger, Jr.
CAPT, MSC, USN



DoD's Bone Marrow Program Saves Lives, Advances Science



Air Force lieutenant (donor) and marrow transplant recipient

By Dr. Robert Hartzman
Director, Bone Marrow Program

The National Marrow Donor Program (NMDP), the U.S. program that recruits volunteers who are willing to provide potentially lifesaving marrow to a stranger and saves lives in addition to developing this important medical science, was started in 1986 through a grant provided by the Navy through the Naval Medical Research Institute (NMRI, now known as the Naval Medical Research Center) and the Office of Naval Research.

In 1990, the Department of Defense

Marrow Donor Program, the C. W. Bill Young Marrow Donor Recruitment and Research Program, was created at NMRI with assistance from the Office of the Secretary of Defense (Health Affairs).

As of this year, over 35,000 transplants have been supported through the NMDP and nearly eight million potential donors are securely listed on the file of the NMDP. The NMDP's national coordinating center in Minneapolis ties together over 500 other clinical and research programs and laboratories using an extremely

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Eleanor Valentin Relieves Richard Vinci as Commander, NMSC

On September 18, RDML Eleanor V. Valentin relieved RDML Richard C. Vinci as the commander of the Navy Medicine Support Center (NMSC) in a ceremony held at Naval Air Station Jacksonville, Florida. RDML Valentin reports from Navy Medicine National Capital Area in Bethesda, Maryland, where she served as the Chief of Staff since May 2008. She will assume duties as Chief of the Medical Service

Corps on October 1, a position she will hold simultaneously as NMSC commander. RDML Valentin holds Bachelor of Science degrees in Zoology and Psychology from the University of Washington, a Masters degree in Public Health (Health Policy and Planning) and a Master of Science degree in Public Health (Biostatistics) from the University of Hawaii.

RDML Vinci commanded NMSC and simultaneously served as Chief of the Dental Corps since November 2007. He will report to the Chief, Bureau of Medicine and Surgery in Washington, D.C., as the Deputy Chief, Bureau of Medicine and Surgery for installations and logistics and will continue to serve as the Dental Corps director. RDML Vinci graduated from William Carey College, Hattiesburg, Mississippi and Louisiana State University School of Dentistry.

NMSC is one of four echelon-3 regional commands in Navy Medicine, each commanded by a flag officer. NMSC manages all of Navy Medicine's environmental, population and public

health; research and development; information management and technology; supply, logistics, purchasing and contracting; and manpower, personnel, education and training. NMSC has subordinate commands with more than 4,000 personnel in 9 countries, 12 states and the District of Columbia.



VADM Adam M. Robinson, Jr., RDML Richard C. Vinci, RDML Eleanor V. Valentin, and LT J. Top salute the national ensign during the NMSC change of command ceremony
Photo by Mass Communication Specialist 1st Class (SW) Arthur N. De La Cruz



RDML Eleanor V. Valentin
Official U.S. Navy photo

NMRC Scientist Reaches Out to Other Military Families

By Dr. Angela Prouty
BDRD, NMRC

Dr. Angela Prouty, a scientist in NMRC's Biological Defense Research Directorate (BDRD), was recently appointed NMRC ombudsman. She was selected by CAPT Chris Daniel and will continue under the new commanding officer, CAPT Richard Haberberger. She is the wife of LT Michael Prouty, a microbiologist in the Enteric Diseases Department of NMRC's Infectious Diseases Directorate.

The ombudsman serves as an official representative of the command and as a point of contact for all family members connected with the command. Angela serves as a liaison providing families with a means to communicate with the command when necessary. One of her most important jobs is to provide key military and civilian resources to allow families to successfully meet the demands and challenges

associated with the deployment of their sailors.

This is Angela's first appointment as an ombudsman, and she is very excited about the opportunity to serve her command in this capacity. While she and her husband are fairly new to the Navy family, they both have relatives who have served. Angela's father, Werner Lang, retired from the Navy after a distinguished 20-year career, and Michael's brother, LT Trevor Prouty, is currently serving in the Navy.

Angela attended Millsaps College in Jackson, Mississippi, graduating with a B.S. degree in Biology. She then moved to San Antonio, Texas to pursue her Ph.D. in Microbiology at the University of Texas Health Science Center at San Antonio (UTHSCSA). After receiving her graduate degree, Angela completed two post-doctoral fellowships, the first in Cellular and Structural Biology at UTHSCSA and the second in Microbiology at the University of Illinois

at Urbana-Champaign. Angela currently works in BDRD's Vaccine and Medical Countermeasures Department. Her work as NMRC ombudsman will provide her with a unique opportunity to more fully understand the mission of the sailors and communicate the importance of those duties to the families of our military community.



NMRC ombudsman Dr. Angela Prouty

BRAC Construction at NAMRL Ahead of Schedule

By Larry Schoenberg
BRAC Manager

Construction of the future home of the Naval Aerospace Medical Research Laboratory (NAMRL), which will be known as the Naval Medical Research Unit (NAMRU)-Dayton, is underway and remains ahead of the original scheduled completion date. Occupancy is scheduled for May 2011 and the majority of personnel moves are anticipated to occur in the summer of 2011.

In parallel, a new Disorientation Research Device (DRD) is being fabricated that will be integrated into the new

building. This state-of-the-art device will consist of a four-degrees-of-freedom capsule mounted on a horizontal track and will be a key building block for future research programs. August 27, 2009 marked a critical military construction (MILCON) milestone with the successful pouring of the support slab and mounting of the foundation fixture for the DRD. This event was considered the most critical step in the process of device integration into the building. The DRD contractor has completed preliminary designs and is developing critical designs to finalize the device/MILCON integration requirements.

A comprehensive transition plan has been developed to ensure a systematic approach to this multidimensional task. Efforts to lay the foundation for a seamless transfer of our research programs to Dayton have been extremely successful. NAMRL is currently pursuing scientific collaborations with the University of Dayton Research Institute, Wright State University, the newly established Air Force Human Performance Wing and the Air Force Research Institute. In addition, we have



An artist's rendering of NAMRU-Dayton integrated our Bureau of Medicine and Surgery, Office of Naval Research and Naval Air Systems Command research sponsor into the process to ensure the continuity of critical funding for mission-essential research programs. Originally published in the NAMRL Science Update



Future location of the Disorientation Research Device



NAMRU-Dayton construction progress as of September 2009

NMRC Promotes Healthy Lifestyles at Health and Wellness Fair

By LT Michael Prouty
NMRC Health and Wellness Committee

The Naval Medical Research Center held its first annual Health and Wellness Day on August 5, 2009. The event was designed to introduce members of the command to making healthy lifestyle choices that will impact them personally and enhance the professional readiness of the command. Preparation for the event began a few months

ago with the distribution of a survey, the results of which were used to address the needs of our members.

The day kicked off with CAPT Chris Daniel, then the NMRC Commanding Officer, introducing the ideas behind a healthy workplace and how it influences productivity. Immediately following the speech, the command participated in group warm-up exercises followed by a choice of three physical activities: yoga, walking or running. All hands were invited to an afternoon session at which representatives from Fleet and Family Support Services (FFSC) and the Navy Chaplain Corps spoke about the various programs and support groups they had to offer. FFSC provided overviews of the variety of workshops they offer, including financial management, stress/anger management, and improving personal relationships. Representatives from the Human Resources Office, the NMRC/Walter

Reed Army Institute of Research Joint Safety Office, National Naval Medical Center Dieticians, the Chaplain Corps, NMRC Command Fitness Leaders and Human Resource Managers from NMRC contracting agencies were on hand to provide information to all members of the command. The Health and Wellness Fair is the first step in creating a healthier, more productive environment at NMRC.



*Group warm-up exercises
Photos by LT Michael Prouty*



CAPT Roosevelt Brown, the Navy Chaplain, and LCDR Kim Donahue provide information on support services

Navy Scientists Work to Fight Infectious Diseases at MIDRP

By CDR Gail Chapman
MIDRP Navy Liaison

The Military Infectious Diseases Research Program (MIDRP), located at Fort Detrick, Maryland, is an Army-led, combined service research, development, test, and evaluation (RDT&E) effort whose mission is to protect the U.S. military against naturally occurring infectious diseases and disease vectors via development of U.S. Food and Drug Administration (FDA) approved vaccines, drugs and diagnostic assays and Environmental Protection Agency approved vector control protection systems (to prevent transmission of infections by insects, ticks, etc.). MIDRP's role is of continuing importance because diseases such as malaria, dengue, diarrhea and leishmaniasis continue to have an adverse impact on military operations and health of service members. MIDRP also supports HIV vaccine research and development.

Until recently, CAPT Mark M. Beavers served as Director and Navy Liaison for MIDRP and was the first Naval officer to hold a position as a Research Area Director under the Commanding General, U.S. Army

Medical Research and Materiel Command. He was responsible for managing the Department of Defense's diverse infectious diseases RDT&E program executed through eight Army and Navy labs both within and outside the continental United States. As the Navy Liaison, CAPT Beavers interfaced within the MIDRP RDT&E arena between Army decision makers, managers in the Office of the Secretary of Defense and Army and Naval Laboratory Commanders so that efficiency and communication were actively engaged. He also served as Program Manager of several research efforts within MIDRP.

The U.S. military has had notable successes due to MIDRP's proven capability to develop candidate products from basic science concepts through pilot scale manufacturing and all phases of animal and clinical evaluation. During CAPT Beavers' tenure, MIDRP executed over thirty FDA Phase 1 and 2 human clinical trials, with nine currently occurring in six countries ranging from malaria to hantavirus. MIDRP also co-manages 53 active infectious diseases Congressional Special Interest projects in close association with the

Telemedicine and Advanced Technology Research Center and the Congressionally Directed Medical Research Program. Also, MIDRP has formally established a multi-service wound infection program focused on antimicrobial treatment and preventive countermeasures for the warfighter. MIDRP continues to excel at "translational research" to move a new product from the technology base to a level where a commercial partner will take the product on to licensure and marketing to the U.S. military and civilians.

CAPT Beavers departed MIDRP on September 25 to serve as Director, U.S. Armed Forces Pest Management Board, Forest Glenn Annex under the Office of the Deputy Under Secretary of Defense for Installations and Environment. COL Julia Lynch replaced CAPT Beavers as the Director of MIDRP; CDR Gail D. Chapman reported as Navy Liaison for MIDRP on August 31. CDR Chapman is a microbiologist who reported from the Naval Health Research Center, Environmental Health Effects Laboratory, Wright Patterson Air Force Base, Ohio, where she served as Officer in Charge.

DoD's Bone Marrow Program Saves Lives, Advances Science

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sophisticated computer and communication system.

The Navy's C. W. Bill Young Marrow Donor Recruitment and Research Program at NMRC has supported over 3,000 life saving "marrow" donations by DoD volunteers as part of the national system, and has recruited over 500,000 DoD volunteers from all services.

The Navy has led the effort that has transformed the genetic matching of donors and patients. When the program was initiated in 1986, only an imprecise serology test was available to match donors and patients and there were only 50 known human leukocyte antigen (HLA) types. Because of the Navy program, the science and technology of transplant matching now

uses high-precision low-cost DNA-based testing of the 2,000 HLA alleles currently known. This transformation in medical science plays the principal role in improving first-year transplant survival from 40 percent in the 1980s to the current 70 percent for a standard patient diagnosis of potentially lethal diseases such as leukemia, a rate nearly identical to survival following HLA matched sibling donor marrow for transplants.

In addition to saving lives every day, the program's Radiation Injury Treatment Network uses the same advances in medicine to provide for contingency capability for potential casualties of marrow toxic injury caused by ionizing radiation or toxins.

Photos by Photographer's Mate 2nd Class Chad McNeeley



A surgical technician places recently harvested bone marrow into a sterile bag

News from the Laboratories

Naval Medical Research Unit No. 3 (Cairo) Building Public Health Capacity in Iraq

By Darnell Gardner
NAMRU-3 Office of Administration



NAMRU-3 Cairo has endeavored to help rebuild the Iraqi public health infrastructure through laboratory

capacity building and a comprehensive training regimen. The training regimen consists of a two-week workshop in basic integrated public health training (conducted in June and July), a management workshop (conducted in July) and a practical zoonotic surveillance system training course (conducted in August), all of which are intended to further develop the skills of local epidemiologists and laboratorians. This training will be applied towards implementation of the acute febrile illness (AFI) study, the severe acute respiratory illness in hospitals (SARI) project, the acute infectious neurologic disease (AIND) project, and zoonotic hospital surveillance. These projects will occur in Baghdad and Erbil, Iraq in coordination with the Ministries of Health and Agriculture. The surveillance systems will also provide the Iraqi clinical and laboratory staff the opportunity to implement sound bio-safety/bio-security systems and practices.



Iraqi epidemiologists and laboratorians participate in lab techniques sessions given by NAMRU-3 personnel

NAMRU-3 will purchase, ship, install and conduct training on all lab equipment and supplies. Ideally, NAMRU-3 will equip the surveillance hospital laboratories to conduct respiratory, urine and blood cultures. Diseases surveyed include influenza, Q fever, brucella, typhoid, leptospira, Hantavirus, rickettsia, West Nile virus and Rift Valley Fever. In addition, an integrated surveillance data management system will be implemented.

NAMRU-3 will purchase computers for Baghdad and Erbil to enhance the sharing, storage and analysis of collected data between the Ministries of Health and Agriculture. Twenty PDA/GPS receivers will be integrated with the main database to provide easy, accurate and secure data collection and transfer.



Attendees at NAMRU-3's Basic Integrated Public Health Training Course in Iraq

Hail and Farewell

To **HM1 Hector Cano** and **HM1 Joel Tisuela**, both of whom are joining the Biological Defense Research Directorate at NMRC.

To **CAPT Mark Beavers**, who leaves his post as Director and Navy Liaison for MIDRP to serve as Director, U.S. Armed Forces Pest Management Board, Forest Glen Annex. (See page 5.)

To **CDR Gail Chapman**, former EHEL OIC, who will serve as Navy Liaison for MIDRP. (See page 5.)

To **LCDR Jeffrey Hayworth** of NHRC, who will soon deploy to Afghanistan.

To **LT Patricia Keilberg** of NAMRU-San Antonio, who is preparing for deployment to Iraq.

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